We claim:

1. A method for use in a system that is adapted to communicate a primitive data stream, the primitive data stream including a plurality of sub-streams, the method comprising the step of:

transmitting at least a portion of a processed sub-stream,

the processed sub-stream representing one of the plurality of sub-streams,

the processed sub-stream including a plurality of strata,

each stratum of the processed sub-stream representing a respective sub-stream component of the one sub-stream.

2. The method of claim 1, wherein at a particular time the strata that comprise the processed sub-stream are concurrently applied to one transmit antenna.

3. The method of claim 1, wherein the transmitting step comprises transmitting the portion of the processed sub-stream from the start of a signal burst until the end of the signal burst.

4. The method of claim 1, wherein at least one transmit feature of said each stratum of the processed sub-stream is different from transmit features of the other strata of the processed sub-stream.

5. The method of claim 4, wherein the transmit feature is bit rate.

6. The method of claim 4, wherein the transmit feature is power level.

7. The method of claim 1, further comprising the steps of:

dividing the one sub-stream into plurality of sub-stream-components;

encoding and modulating each sub-stream component to obtain the strata of the processed sub-stream; and

combining the strata to form the processed sub-stream.

8. The method of claim 1, wherein the processed sub-stream complies with a CDMA standard.

9. The method of claim 1, wherein the processed sub-stream complies with a OFDM standard.

10. A method for use in a system that is adapted to communicate a primitive data stream, the primitive data stream including a plurality of sub-streams each including a respective plurality of sub-component data streams, the method comprising the step of:

transmitting at least a portion of each of a plurality of processed sub-streams,

each one of the processed sub-streams representing a respective one of the sub-streams,

each processed sub-stream including a plurality of strata,

each stratum of each processed sub-stream representing a respective one of the sub-stream-components of one of the component data streams represented by that processed sub-stream.

11. The method of claim 10, wherein:

the system is a multiple output system having at least two transmit antennas; and

at a particular point in time each of the processed sub-streams is applied to a respective one of the transmit antennas.

12. The method of claim 10, wherein:

the system is a multiple output system having at least two transmit antennas; and

the transmission of the processed sub-streams is started concurrently on the at least two transmit antennas.

13. The method of claim 10, wherein the transmitting step comprises transmitting the portion of the processed sub-stream from the start of a signal burst until the end of the signal burst.

14. The method of claim 10, wherein at least one transmit feature of said each stratum of one of the processed sub-streams is different from transmit features of the other strata of the one processed sub-stream.

15. The method of claim 14, wherein the transmit feature is bit rate.

16. The method of claim 14, wherein the transmit feature is power level.

17. The method of claim 10, further comprising the steps of:

dividing each sub-stream into the respective plurality of sub-stream-components;

encoding and modulating each sub-stream component to obtain the strata; and

combining the strata representing one of the pluralities of sub-stream-components to form one of the processed sub-streams.

18. The method of claim 1, wherein the processed sub-stream complies with a CDMA standard.

19. The method of claim 1, wherein the processed sub-stream complies with a OFDM standard.

20. A method for processing a received signal that includes at least a portion of at least one processed sub-stream, each processed sub-stream representing a respective one of a plurality of sub-streams, each sub-stream including a respective plurality of sub-stream-components, each processed sub-stream including a plurality of strata, each stratum of each processed sub-stream representing a respective one of the plurality of sub-stream-components of the particular sub-stream represented by that particular processed sub-stream, the method comprising the steps of:

(a) decoding at least a portion of one of the strata to obtain at least a portion of its respective sub-stream component;

(b) removing the decoded portion of the one stratum from the received signal; and

(c) decoding at least a portion of another of the strata to obtain at least a portion of its respective sub-stream component.

21. The method of claim 20, further comprising the steps of:

(d) removing the decoded portion of the other stratum from the received signal; and

(e) repeating decoding step (c) and removing step (d) until all of the sub-stream-components represented by the strata in the received signal are decoded.

22. The method of claim 20,

wherein:

the stratum decoded in decoding step (a) is portion of a first processed sub-stream;

the stratum decoded in decoding step (c) is portion of the first processed sub-stream after the decoded portion of the one stratum has been removed in step (b); and

the signal comprises at least two processed sub-streams; and

the method further comprising the steps of:

(f) decoding at least a portion of one of the strata that is part of another processed sub-stream;

(g) decoding at least a portion of another of the strata that is part of the other processed sub-stream.

23. The method of claim 22, wherein:

decoding step (f) occurs concurrently with decoding step (a); and

decoding step (g) occurs concurrently with decoding step (c).

24. The method of claim 22, wherein decoding steps (f) and (g) occur after decoding step (c).

25. The method of claim 22, wherein:

at least one transmit feature of said each stratum of one of the processed sub-streams is different from transmit features of the other strata of the one processed sub-stream;

the transmit features of the stratum decoded in decoding step (a) are the same as the transmit features of the stratum decoded in decoding step (f); and

the transmit features of the stratum decoded in decoding step (c) are the same as the transmit features of the stratum decoded in decoding step (g).

26. The method of claim 20, wherein at least one transmit feature of said each stratum of one of the processed sub-streams is different from transmit features of the other strata of the one processed sub-stream.

27. The method of claim 26, wherein:

the transmit feature comprises a bit rate;

the stratum decoded in decoding step (a) having a bit rate that is lower then the bit rate of the other strata that are part of the same one of the processed sub-streams; and

the stratum decoded in decoding step (c) having a higher bit rate than the bit rate of the stratum decoded in decoding step (a).

28. The method of claim 26, wherein:

the transmit feature comprises a power level;

the stratum decoded in decoding step (a) having a power level that is higher than the power level of the other strata that are part of the same one of the processed sub-streams; and

the stratum decoded in decoding step (c) having a lower power level than the power level of the stratum decoded in decoding step (a).

29. The method of claim 20, wherein:

decoding step (a) comprises separating out and decoding the at least portion of the one stratum to obtain the at least portion of its respective sub-stream component;

removing step (b) comprises re-encoding the decoded respective sub-stream component to obtain the one stratum and subtracting the re-encoded one stratum from the received signal; and

decoding step (b) comprises separating out and decoding the at least portion of the other stratum to obtain the at least portion of its respective sub-stream component.

30. A transmitter for use in a system adapted to communicate at least a portion of a primitive data stream, the primitive data stream including a plurality of sub-streams, the transmitter comprising:

a first stratifier that stratifies one of the component data streams into a processed sub-stream,

the processed sub-stream component having a plurality of strata,

each stratum of the processed sub-stream representing a respective one of a plurality sub-stream component of the one sub-stream.

31. The transmitter of claim 30, wherein the first stratifier comprises:

a demultiplexer having an input that receives the one sub-stream and a plurality of outputs each for outputting one of the of sub-stream-components;

a plurality of encoder/modulators each having an input coupled to one of the outputs of the demultiplexer, each encoder/modulator encodes and modulates at least a respective one of the sub-stream-components to obtain its respective stratum; and

a combiner having a plurality of inputs each coupled to an output of one of the encoder/modulators and an output for outputting the processed sub-stream.

32. The transmitter of claim 31, wherein:

a bit rate of each stratum of the processed sub-stream is different from bit rates of the other strata of the processed sub-stream;

the demultiplexer is a variable rate demultiplexer.

33. The transmitter of claim 31, wherein:

a power level of each stratum of the particular processed sub-stream is different from power levels of the other strata of the particular processed sub-stream; and

each of the encoder/modulators is operable to produce the strata such that the power level of each stratum of the particular processed sub-stream is different from the power levels of the other strata of the particular processed sub-stream.

34. The transmitter of claim 30, wherein the transmitter further comprises:

a primary signal demultiplexer having an input for receiving the primary signal and a plurality of outputs each for outputting one of the sub-streams;

a further plurality of stratifiers, each stratifier capable of stratifying at least one of the component data streams into a respective processed sub-stream, each stratum of one of the processed sub-streams representing a respective one of a plurality of sub-stream-components of the respective sub-stream of the one processed sub-stream.

35. The transmitter of claim 30, wherein at least one transmit feature of each stratum of the processed sub-stream is different from transmit features of the other strata of the processed sub-stream.

36. The transmitter of claim 30, wherein the transmitter is part of a base station of a wireless communication system.

37. The base station of claim 36, wherein the base station has a plurality of transmit antennas.

38. The transmitter of claim 30, wherein the transmitter is part of a terminal.

39. The wireless communication system of claim 36, wherein the wireless communication system is a CDMA system.

40. The wireless communication system of claim 36, wherein the wireless communication system is a OFDM system.

41. A receiver comprising:

at least one receive antenna each receive antenna having an output for outputting a receive antenna signal, each receive antenna signal including at least a portion of at least one processed sub-stream, each processed sub-stream representing a respective sub-stream, each processed sub-stream including a plurality of strata, each stratum of each processed sub-stream representing a respective one of a plurality of sub-stream-components of the respective sub-streams of the processed sub-stream;

a processor having an input coupled to the outputs of the receive antennas, the processor adapted to:

obtain a receive signal from the receive antenna signals;

decode at least a portion of one of the strata to obtain at least a portion of its respective sub-stream component;

remove the decoded portion of the stratum from the receive signal; and

decode at least a portion of another of the strata to obtain at least a portion of its respective sub-stream component.

42. The receiver of claim 41, wherein the processor comprises a strata processor for decoding the stratum.

43. The receiver of claim 42, wherein the processor further comprises:

an encoder/modulator having an input coupled to the output of the strata processor, the encoder/modulator adapted for re-encoding the decoded sub-stream component to obtain its respective stratum; and

a combiner for subtracting any re-encoded stratum from the received signal.

44. The receiver of claim 41, wherein the processor is further adapted to:

remove the decoded portion of the other stratum from the receive signal; and

repeat the removing and the decoding of at least a portion of another stratum until all sub-stream-components represented by the strata in the received signal are decoded.

45. The receiver of claim 41, wherein processor is adapted to decode the strata of a first and a second processed sub-stream concurrently.

46. The receiver of claim 45, wherein:

at least one transmit feature of each stratum of one processed sub-stream is different from transmit features of the other strata of the same one processed sub-stream;

the strata decoded concurrently have the same transmit features.

47. The receiver of claim 41, wherein processor is adapted to decode the strata of a second processed sub-stream after decoding the strata of a first processed sub-stream.

48. The receiver of claim 41, wherein at least one transmit feature of each stratum of one processed sub-stream is different from transmit features of the other strata of the same one processed sub-stream.

49. The receiver of claim 48, wherein the transmit feature comprises a bit rate.

50. The receiver of claim 48, wherein the transmit feature comprises a power level.

51. The receiver of claim 41, wherein the receiver is part of a base station of a wireless communication system.

52. The receiver of claim 41, wherein the receiver is part of a terminal.

53. The wireless communication system of claim 51, wherein the wireless communication system is a CDMA system.

54. The wireless communication system of claim 51, wherein the wireless communication system is a OFDM system.

55. A method for processing a received signal that includes at least a portion of at least one processed sub-stream, each processed sub-stream representing a respective one of a plurality of sub-streams, each sub-stream including a respective plurality of sub-stream-components, each processed sub-stream including a plurality of strata, each stratum of each processed sub-stream representing a respective one of the plurality of sub-stream-components of the particular sub-stream represented by that particular processed sub-stream, the method comprising the steps of:

(a) decoding at least a portion of one of the strata to obtain at least a portion of its respective sub-stream component; and

(b) decoding at least a portion of another of the strata to obtain at least a portion of its respective sub-stream component.

56. The method of claim 55, further comprising the step of repeating decoding step (b) until all of the sub-stream-components represented by the strata in the received signal are decoded.